

It is claimed:

1. Fibers for reinforcing matrix compositions, comprising: fibers bearing physical impression of at least one other fiber intertwined or interwoven and flattened against said fibers.

5 2. The fibers of claim 1 wherein said fibers have an average length of 5-100 mm and more preferably 5-75 mm, an average fiber width of 0.5-8.0 mm, and first and second opposed ends defining therebetween an intermediate elongate fiber body having portions thereof bearing physical impression of fiber intertwinement or interweaving.

10 3. The fibers of claim 1 wherein said physical impression comprises a projection or series of projections, a depression or series of depressions, or a combination thereof, said projection or depression having a diagonal orientation with respect to the fiber length.

15 4. The fibers of claim 3 wherein said physical impression comprises a series of depressions.

5. The fibers of claim 1 comprising selected from at least one synthetic polymer, at least one metal, or combination thereof.

6. The fibers of claim 5 comprising polypropylene, polyethylene, styrene, or combination thereof.

20 7. The fibers of claim 5 comprising steel fibers.

8. The fibers of claim 1 further having a micro-diastrophic surface.

9. The fibers of claim 4 wherein said series of depressions correspond with flattened body portions that are wider than the average width of said fibers.

10. The fibers of claim 1 wherein said fibers are monofilament.

25 11. The fibers of claim 1 wherein said fibers are fibrillatable.

12. A method for treating fibers, comprising: introducing intertwined or braided fibers between a pair of rollers to flatten the fibers.

13. The method of claim 12 wherein said fibers are intertwined.

14. The method of claim 12 wherein said fibers are braided.

30 15. The method of claim 13 further comprising cutting said intertwined fibers after flattening, thereby providing flattened fibers having a physical impression of at least one other fiber intertwined and flattened against them.

16. The method of claim 12 wherein said fibers comprise at least one synthetic polymer, at least one metal, or a combination thereof.

17. The method of claim 12 wherein said fibers are coated.

18. The method of claim 13 wherein said flattening provides a micro-
5 diastrophic surface on the flattened fibers.

19. The method of claim 12 wherein, in said step of introducing intertwined or braided fibers between said rollers, said fibers are introduced as an intertwined rope comprising further smaller intertwined or braided fiber bundles.

20. The fibers produced by the method of claim 12.

10 21. A matrix composition comprising a matrix material and the fibers of claim 1.

22. The matrix composition of claim 21 wherein said matrix material comprises a hydratable cementitious composition.

15 23. The composition of claim 21 wherein said matrix material is an adhesive, an asphalt, a composite material, a resin, a plastic, an elastomer, a hydratable cementitious material, or mixture thereof.

24. A method for modifying a matrix material, comprising introducing into said matrix material the fibers of claim 1.

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